Dialogic®

Dialogic® DN/I300TEPHMP Digital Network Interface Board

Installation Guide

1. Product Description

The Dialogic® DN/I300TEPHMP Digital Network Interface Board ("board") is a high-density, high-performance, network interface board in a universal PCI form factor with one T1/E1 digital network interface. This board is designed to be used with Dialogic® Host Media Processing (HMP) software (Release 2.0 or higher). The DN/I300TEPHMP Digital Network Interface Board includes the following components:

RJ-48C Jack: One connector to a T1 or E1 trunk.

General Network Interface Alarm LED: When lit, indicates an alarm condition is present on the trunk.

Reset LED: When lit, indicates that the board is in the reset state.

Power LED: When lit, indicates power is on.

SW1: Rotary switch used to set board identification (Linux system only).

Alarm/Status LEDs: A set of four LEDs for the trunk. During power-up, the LEDs indicate Power On Self Test (POST) status. After the board is started, the green, yellow, and red LEDs indicate normal operation or Carrier Failure Alarms (CFAs) as shown in the following table. The Loopback LED indicates when the trunk is in loopback mode.

Green	Yellow	Red	Conditions
ON	OFF	OFF	Normal Operation
OFF	OFF	ON	Loss of Signal (LOS)
ON	OFF	ON	Red Alarm
ON	ON	OFF	Yellow Alarm/Remote Alarm Indicator (RAI)
ON	ON	ON	Alarm Indicator Signal (AIS)

Part number: 64-0083-02

Physical Layout
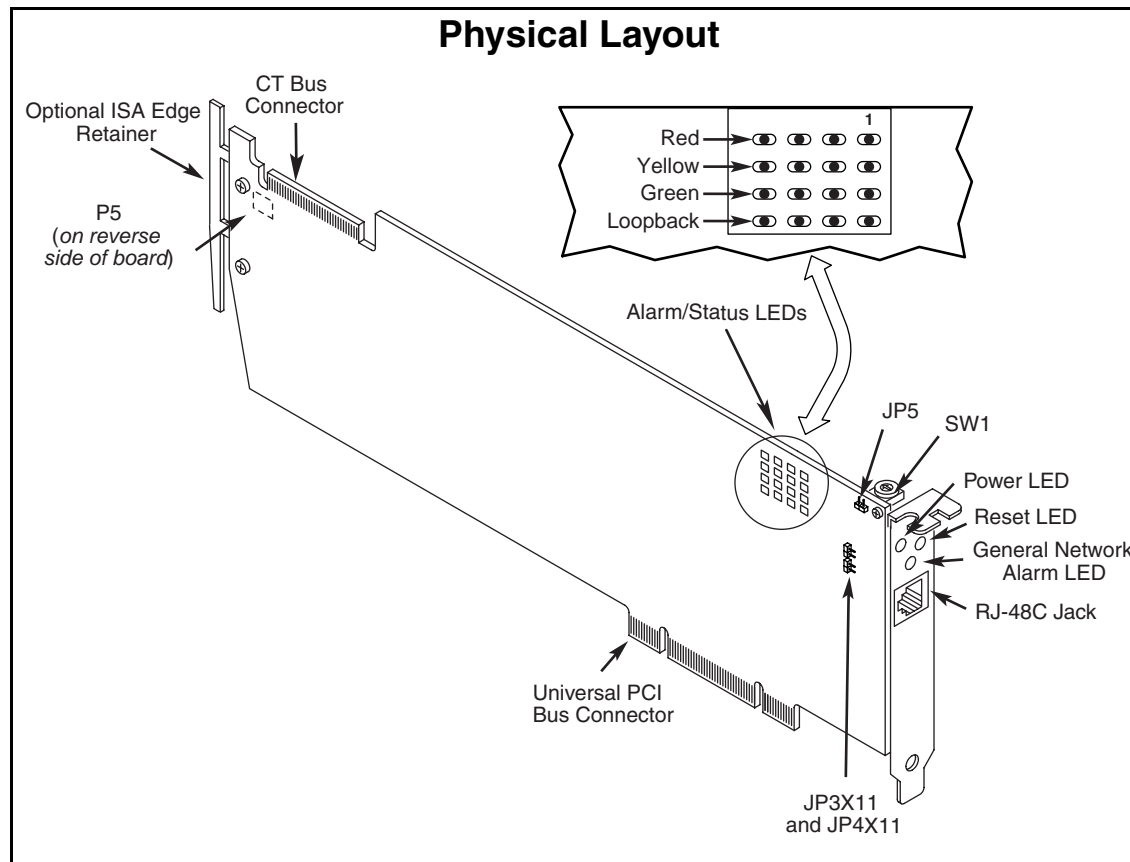
CT Bus Connector: Connector to CT Bus.

Optional ISA Edge Retainer: Bracket used to install board in an ISA form factor PCI slot.

P5: CT Bus Termination Jumper Block. Factory default is unterminated. Signals must be terminated only on boards at each end of an optional CT Bus cable.

JP3X11 and JP4X11: Power-off Default Front End Loopback for the trunk. Factory default is enabled (jumper clips installed).

JP5: Boot up Default Front End Loopback. Factory default is enabled (jumper clip removed).

Universal PCI Bus Connector: Connector to universal PCI Bus slot.

Additional Information

Additional information about the DN/I300TEPHMP Digital Network Interface Board is available from a number of sources.

The product data sheet, available at http://www.dialogic.com/products/list.asp, provides a functional description as well as information about applications and configurations, features, and technical specifications.

Refer to the Release Guide and the online Release Update for your Dialogic® Host Media Processing (HMP) software release to verify that the DN/I300TEPHMP Digital Network Interface Board is supported in the release and for information on any new features or issues that may relate to it.

The Regulatory Notices document that is packed with each Dialogic® DN/I300TEPHMP Digital Network Interface Board contains safety warnings and national requirements for proper operation of telecommunications equipment.

2. Before You Begin

Protecting the Board from Damage

CAUTION: All computer boards are sensitive to electrostatic discharge ("ESD"). Handle all static-sensitive boards and components at a static-safe work area, and observe anti-static precautions at all times.

If you are not familiar with ESD safety precautions, visit http://dialogic.com/support/hwinstall to learn more.

Unpacking the Board

CAUTION: Do not remove the board from the anti-static packaging until you are ready to install it. Observe proper anti-static precautions at all times.

Unpack the board according to the following steps:

1. Prepare a static-safeguarded work area.
2. Carefully remove the board from the shipping carton and static-shielding bag. Handle the board by the edges and avoid touching the board's components.
3. Lay the board on the static-safe work surface.

Note: Place boards in static-shielding bags when carrying boards from station to station.

Setting the Board ID

The device driver assigns board instance numbers in ascending order (beginning with 0) as it detects each board in your system. A board instance number is the identification (ID) number used by the Dialogic® Host Media Processing (HMP) software to recognize the board.

Note: If you add or remove a board, the system may change the existing board instance numbers, depending on the PCI bus and slot number where the board is installed or removed.

In a Windows system, leave **SW1** (see Physical Layout) set to the factory default of 0 to let the system automatically assign board instance numbers by PCI bus slot number. After the hardware and the Dialogic HMP software are installed, refer to the Dialogic® Configuration Manager (DCM) to retrieve the assigned board instance ID number(s). Dialogic® Configuration Manager (DCM) is a utility that enables you to add new boards to your system, start and stop system service, and work with board configuration data. This utility can be accessed from the Start menu in the Dialogic HMP software program folder. For more information about board identification, see the DCM online help.

In a Linux system, you must set **SW1** to a unique number for each installed board. Use a non-magnetic screwdriver to turn SW1 to one of 16 board settings, 0–9 or A–F. After the hardware and the Dialogic HMP software are installed, refer to the proper configuration files to retrieve the assigned board instance ID number(s). For more information about Linux configuration files, see the Dialogic HMP software release documentation.

Setting CT Bus Termination

This section applies if you are using a CT Bus cable to connect your board to other boards in the system.

Bus signals are terminated when the CT Bus jumper clip is installed. To terminate bus signals, install a jumper clip on the pair of CT Bus termination pins only on boards located at each end of the bus cable.

Factory default is unterminated (jumper clip removed).

The following figure shows the pair of pins used for CT Bus termination. Refer to **P5** in the Physical Layout figure for the location of the jumper block.
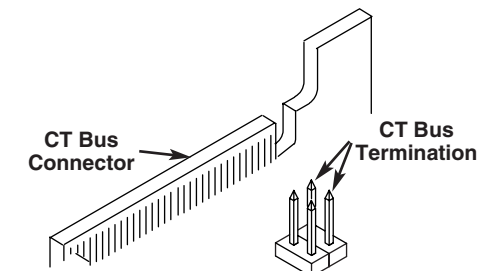
Setting Power-off Default Front End Loopback

When the system shuts down (powers off), the board enables analog loopback to the connected trunk line. Factory default setting is enabled for the trunk (jumper clips are installed). To disable, remove the pair of jumper clips for the trunk.

The pair of jumpers for the trunk is JP3X11 and JP4X11. Refer to the Physical Layout figure for the location of the jumpers.

Setting Boot Up Default Front End Loopback

When the system is started or restarted, the board enables analog loopback to the connected trunk line and provides digital loopback to the board. Factory default setting is enabled (jumper clip is removed). To disable, install the jumper clip. Refer to **JP5** in the Physical Layout figure.

3. Installing the Board

CAUTION: These procedures assume familiarity with the general terminology associated with electronic equipment and with the safety practices and regulatory compliance required for using and modifying electronic equipment.
These procedures should be performed only by qualified technical personnel.

WARNING! Unplug the equipment before performing the procedures described here. Failure to disconnect the power before you open the chassis can result in personal injury. Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.

CAUTION: To avoid possible damage to the board, remove power from the computer before beginning installation. Observe proper anti-static precautions at all times while handling and installing the board.

Note: It is recommended that you install the hardware before installing the software.

Install the board as follows:

1. With your computer at a static-safe work area, switch off the power and disconnect the power cord.
2. Remove the computer cover.
3. Select an empty PCI expansion bus slot and remove the slot's retaining screw and coverplate.
4. If you are installing your board in an ISA form factor PCI slot, optionally install an ISA edge retainer on the board.
5. Using the slot's board guides, insert the edge connector of the board into the bus slot. Press firmly until the board is securely seated in the slot.
6. Replace and tighten the retaining screw to secure the board firmly in the bus slot.
7. Repeat steps 3–6 for each board you are installing.
8. If appropriate, use an optional CT Bus cable to connect the board(s) you are installing to other boards in the system. To preserve the electrical integrity of the CT Bus, use a CT Bus cable with the appropriate number of connectors ("drops"). It is recommended that no more than two connectors at either end of the cable be left unused. For boards located at each end of the CT Bus cable, be sure to set bus termination appropriately as described in the Setting CT Bus Termination section.
9. Replace the computer cover when finished and reconnect the power cord.
10. Turn on the power to the computer.

Note: If your BIOS is set to use Plug and Play technology and there are ISA boards in your system, an IRQ conflict can occur if your PCI board is assigned the same IRQ as an ISA board. This can cause the machine to stop responding. To prevent this conflict, enter the BIOS and reserve the appropriate IRQs (those used by your ISA boards) for ISA use only.

4. Connecting to External Equipment

Connect the RJ-48C jack on the board bracket to the switch using a digital T1 or E1 crossover cable. If you are building your own cable, you should be familiar with the connector pin designations for the RJ-48C jack.

RJ-48C Connector Pin Designations

Pin 1
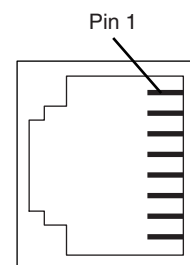
Pin	Function
1	RCV_RING
2	RCV_TIP
3	N/C
4	XMIT_RING
5	XMIT_TIP
6	N/C
7	N/C
8	N/C

5. After Installing the Board

After installing the board, proceed with these activities:

- Installing the software, as described in the software installation guide for your software release
- Configuring the software, as described in the configuration guide for your software release
- For technical specifications and product information go to: http://www.dialogic.com/products.htm.

Note: If you are adding hardware to an existing system, you do not need to uninstall existing Dialogic® Host Media Processing (HMP) software.

6. Removing the Board

Removal of the board is a straightforward process. Remove the board using the reverse of the procedure described in Section 4, Installing the Board above.

7. Warranty and Return Information

Warranty Period

For specific warranty information for this board, refer to the Warranty section of the Products page, located at this URL: http://www.dialogic.com/warranties/.

Contacting Technical Support

Dialogic provides technical support for its products through a network of value added distributors who are trained to answer technical questions on installing and configuring Dialogic® products. If you are unsure how to contact your support channel, please call Dialogic in the United States at 973-967-6600 (9am-5pm EST) and we will assist in obtaining the appropriate support channel.

Outside the United States please refer to http://www.dialogic.com/support/contact to obtain local contact information. Dialogic also provides direct support via Dialogic® Pro™ Services agreements. For more details of direct support from Dialogic please refer to:http://www.dialogic.com/support/DialogicPro

Returning a Product

To return a board for warranty repair or any other returns, please refer to the following: http://www.dialogic.com/support/hwfaults.

8. Sales Assistance

If you have a sales question, please contact your local Sales Representative or the Regional Sales Office for your area. Address, telephone and fax numbers, are available at the Dialogic website located at: http://www.dialogic.com/contact.htm.

To purchase Dialogic® products, please refer to the following website to locate the appropriate supplier: http://www.dialogic.com/purchase.htm.